

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

The title has been amended to be indicative of the claimed subject matter and, thereby, overcome the applied objection.

The specification has been amended to overcome the objections applied to the specification and drawings. No new matter is believed to be introduced by the amendments to the specification.

Claims 25, 26, 31, and 33-41 have been amended, and claims 42-49 have been newly added. Claims 27-30 have been cancelled. The amendments have been drafted to overcome the indefiniteness rejections applied to claims 25-41. Support for the amended and new claims is provided for example in the cancelled claims, Fig. 11, and paragraphs [0016], [0036], [0135], [0138], [0143], [0152], [0156], and [0157] of the published specification. (It should be noted that references herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to any particular aspect of the referenced embodiments.)

Claims 25-41 were rejected, under 35 USC §102(e), as being anticipated by Malkamaki (US 7,310,336). To the extent that these rejections may be deemed applicable to the amended claims presented herein, the Applicants respectfully traverse as follows.

Claim 25 now defines a method for controlling the transport format of synchronous hybrid automatic repeat request (HARQ) protocol retransmissions. According to this method, an unsuccessfully received data packet is retransmitted according to a transport format using the

synchronous transmission timing of the synchronous HARQ protocol, wherein the transport format is indicated by a control message received in parallel to the feedback message through a control channel.

It is submitted that Malkamaki does not disclose the Applicants' claimed subject matter of:

(1) using for the transmission of data packets a synchronous HARQ protocol (see preamble of claim 25) with synchronous retransmissions (see last feature of claim 25), and

(2) a transport format being indicated for the retransmission of the data packet by a control message received in parallel to the feedback message through a scheduling related control channel, and the transport format being applied to the synchronous retransmission of the data packet (see penultimate and last feature of claim 25).

By contrast to the claimed subject matter, Malkamaki does not disclose a synchronous HARQ protocol using synchronous retransmission. Malkamaki explicitly discloses the use of an asynchronous HARQ protocol (see Malkamaki col. 5, lines 12-18). A synchronous HARQ protocol using synchronous retransmissions identifies the HARQ process of all transmissions of a data packet (i.e., the initial transmission thereof and its retransmissions) based on the time when the message is received (see Applicants' paragraphs [0066]-[0067] of the published specification).

Although Malkamaki discloses using either synchronous or asynchronous retransmissions, a synchronous or asynchronous retransmission is not the same thing as a synchronous or asynchronous HARQ protocol. The terms “synchronous retransmissions” and “asynchronous retransmissions” are used to indicate the timing of the retransmissions. In a

HARQ protocol using synchronous retransmissions, the retransmissions are sent in given intervals relative to the timing of the initial transmission of a packet (see Malkamaki col. 7, lines 57-61). As the transmission timing is therefore known, no scheduling of the retransmissions is required. In a HARQ protocol using asynchronous retransmissions, retransmissions are sent after the minimum round trip time delay relative to the timing of the initial transmission of a packet (see Malkamaki col. 7, lines 57-64). As the timing of for the retransmissions is thus not known, the retransmissions need to be scheduled (i.e., for uplink transmissions, the timing for the retransmission is indicated by a scheduling command to the mobile terminal).

In contrast, the terms “synchronous HARQ protocol” and “asynchronous HARQ protocol” are used to indicate the timing of initial transmissions. In a “synchronous HARQ protocol,” the HARQ process number is implicit to transmission timing (i.e., the TTIs are associated with respective HARQ processes in a periodic manner – see Fig. 10 of the published specification), and does therefore not need to be signaled. In an “asynchronous HARQ protocol,” each TTI may carry data of any of the available HARQ processes. Therefore of the HARQ process is not implicit to the transmission timing and therefore needs to be signaled to the receiver (see Applicants' paragraphs [0066]-[0067] of the published specification and Malkamaki col. 3, lines 29-30 as to the signaling of the HARQ process number for asynchronous HARQ protocols).

Moreover, Malkamaki does not disclose the claimed subject matter of retransmitting a data packet using a transport format indicated by a control message received in parallel to the feedback message through a scheduling related control channel. Although Malkamaki discloses adaptive modulation and coding (see Malkamaki col. 6, lines 32-39), Malkamaki is silent as to

how this may be applied to the asynchronous HARQ protocol. More specifically, Malkamaki does not disclose that the transport format of retransmissions of an unsuccessfully received data packet is controlled. Furthermore, Malkamaki does not disclose transmitting a feedback message in parallel to the control message that is signaling the transport format.

Accordingly, due to at least the above-noted subject matter, the Applicants respectfully submit that Malkamaki does not identically disclose the subject matter now defined by claim 25 and, thus, does not anticipate claim 25. Independent claims 40 and 41 similarly recite the above-mentioned subject matter distinguishing method claim 25 from Malkamaki, but with respect to apparatuses. Therefore, allowance of claims 25, 40, and 41 is considered to be warranted. The dependent claims are considered to be allowable due to their dependence from an allowable independent claim and also due to their recitation of subject matter that provides an independent basis for their individual allowability.

In view of the above, it is submitted that this application is in condition for allowance, and a notice to that effect is respectfully solicited.

Respectfully submitted,

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